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SSC Innovations Wins Two Contracts to Provide the Defense Department with the Ability to Leverage Limited Wireless Spectrum

Major National Spectrum Consortium Prime Contracts Total Nearly \$20 Million

Vienna, VA – January, 2017 – SSC Innovations, LLC (a subsidiary of [Shared Spectrum Company](#)), a leading innovator of spectrum intelligence software and solutions, has been chosen to showcase how its innovative dynamic spectrum access (DSA) technology can be used to give commercial and government entities greater access to limited spectrum resources. The company was awarded two contracts totaling nearly \$20 million from the Department of Defense (DoD) to test and deploy DSA so the government can share spectrum with government users, cellular carriers and news organizations.

“Spectrum management to date has been largely a manual and time-consuming process that inefficiently allocates these limited resources,” said Dr. Mark McHenry, SSC’s founder and president. “SSC is taking a new approach; combining sensing intelligence in mobile devices with the more traditional database queries, to significantly accelerate the speed with which spectrum can be managed, enabling multiple users to share the same band. Our work on these newest contracts will prove how our solution can address very specific problems, and be the basis for revolutionary changes to spectrum management in the future.”

SSC and the DoD have been working for nearly 15 years on DSA software to address the spectrum challenges the military faces in the field. Both contracts expand on this research, leveraging funds from the AWS-3 spectrum auction. Because it is cost prohibitive and takes too long to relocate incumbent users, or comparable spectrum may not be available to ensure continuity of critical functions, the government is looking beyond the traditional approach of clearing federal users from spectrum in order to auction it for private sector.

The first DoD contract, worth nearly \$16.8 million over two years, focuses on improving military communications performance in the field. The Spectrum Agile Wideband Networking Waveform (WNW) Through Innovative Protocols (SAWTIP) proposal seeks to use SSC’s DSA solution to make WNW more robust, resolve critical spectrum availability shortfalls, simplify frequency planning and autonomously optimize WNW performance in complex radio frequency environments.

SSC’s DSA software will be employed in WNW radios used by the U.S. Army for vehicle-to-vehicle communications. The radios will rely on algorithms in the radio to help efficiently manage spectrum locally, and will use networking planning tools to allocate resources and to support spectrum enforcement. The DSA algorithms use multiple methods (signal specific sensing, geo-location databases, altitude, time of day, and others) to determine what frequency to be used by each WNW radio. These algorithms are being hosted on the Northrop Grumman



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Freedom radio and the JENM management software to support extensive laboratory testing and government evaluation. Northrop Grumman Corporation and GIRD Systems Inc are providing critical radio and WNW technology to the project.

Similarly, in the second contract, SSC's DSA solution will be used to support spectrum sharing between the DoD and electronic news gathering (ENG) organizations. DSA will increase the amount of spectrum, bandwidth and geographic proximity shared by these two groups over time. The project focuses on the DoD Tactical Targeting Network Technology (TTNT) system, but is also applicable to other DoD systems in the 2025-2210 MHz band, including small unmanned aircraft systems and high resolution video systems.

SSC is working with Meintel, Sgrignoli & Wallace, consultants specializing in broadcasting, telecommunications and consumer electronics engineering, on the two-year, \$1.6 million contract. The DSA algorithms use multiple methods (ENG radio beaconing, signal specific sensing, geo-location databases, altitude, time of day, and others) to determine what frequency to be used by each DoD radio. The project includes implementing the DSA software on a radio and field tests with an ENG band radio.

About Shared Spectrum Company

Founded in 2000, SSC is a leading developer of spectrum intelligence technologies. Based in Vienna, Va., the company has developed innovative cognitive radio technologies for wireless applications in a broad range of the frequency bands. Additional information is available at www.sharedspectrum.com.

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